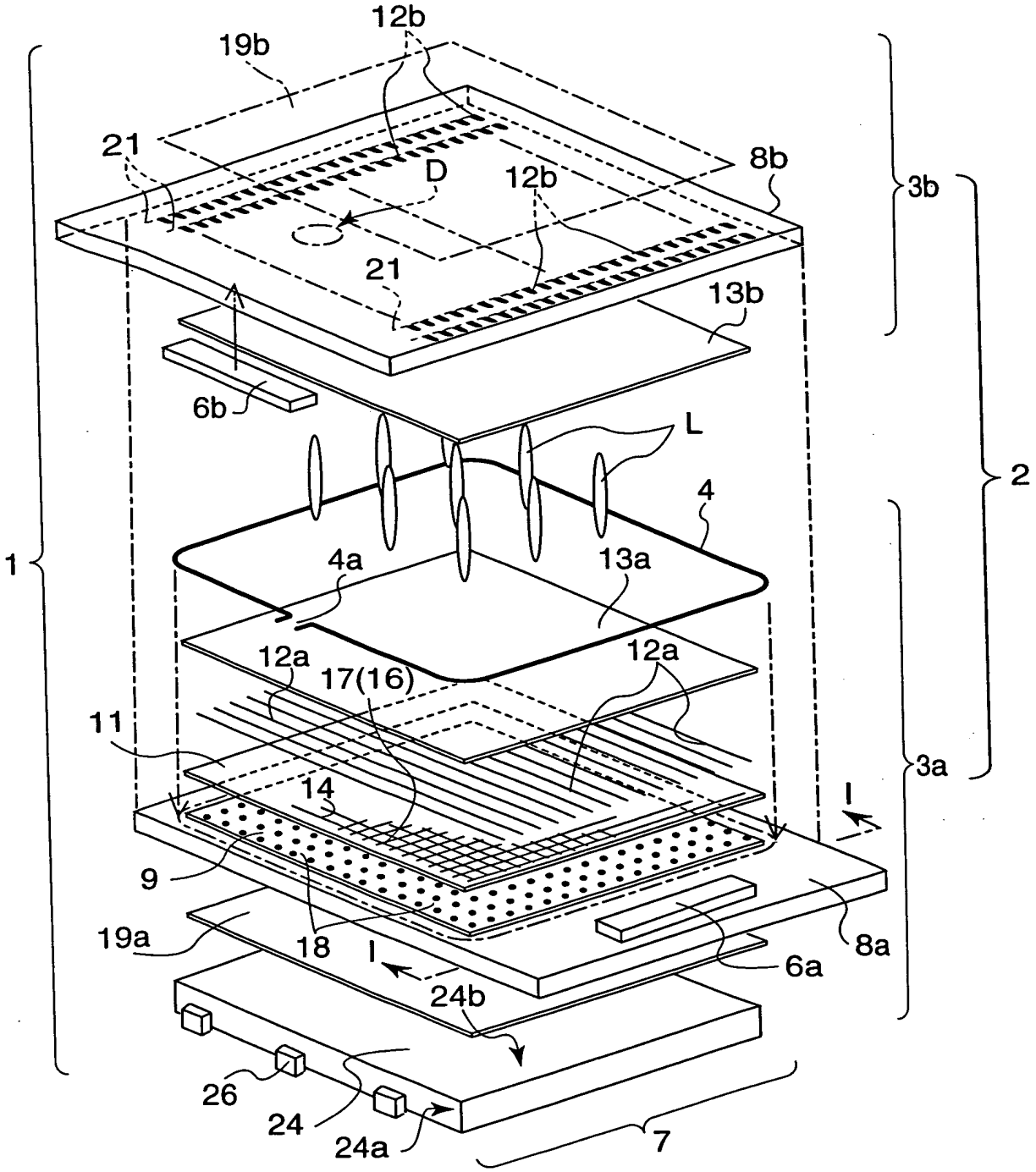
12b
19b
21
D
12b
8b
3b
21
13b
6b
L
2
4
1
4a
13a
12a
12a
17(16)
11
3a
14
I
9
19a
18
I
8a
6a
24b
26
24
24a
7

FIG. 1

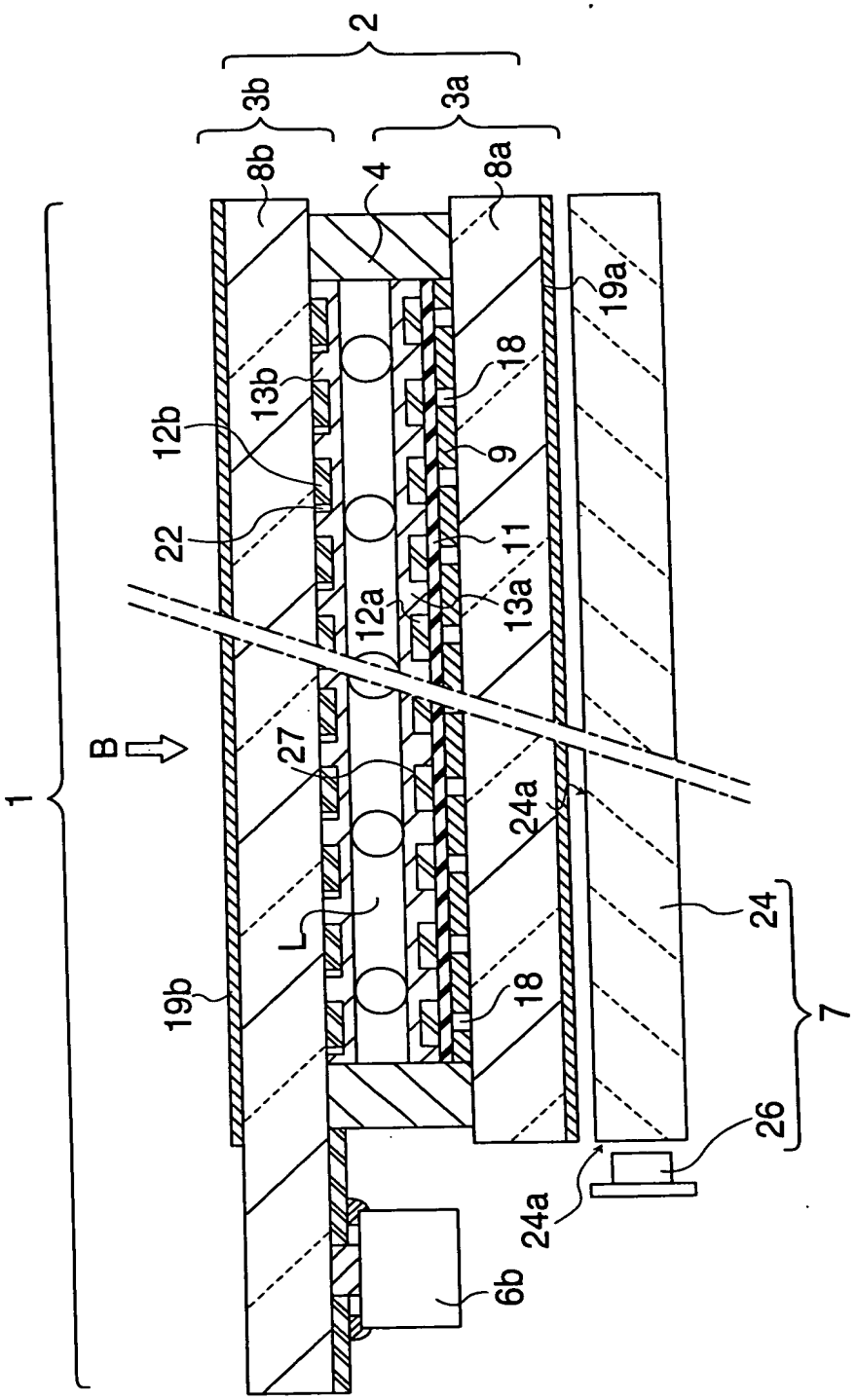
2
3b
3a
8b
4
8a
19a
18
13b
12b
9
22
11
13a
12a
B
1
27
24a
24
L
19b
18
7
26
24a
6b

FIG. 2

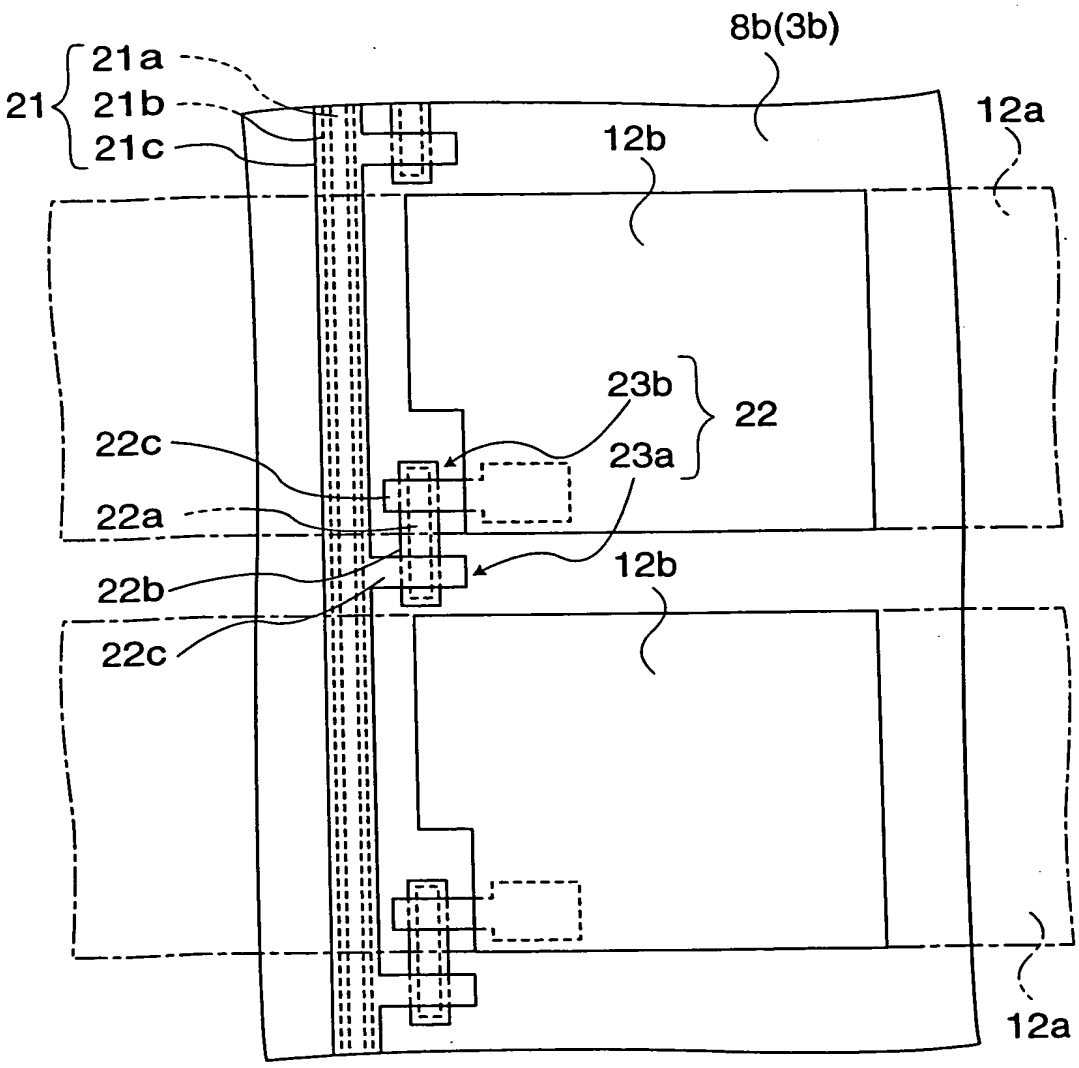

FIG. 3

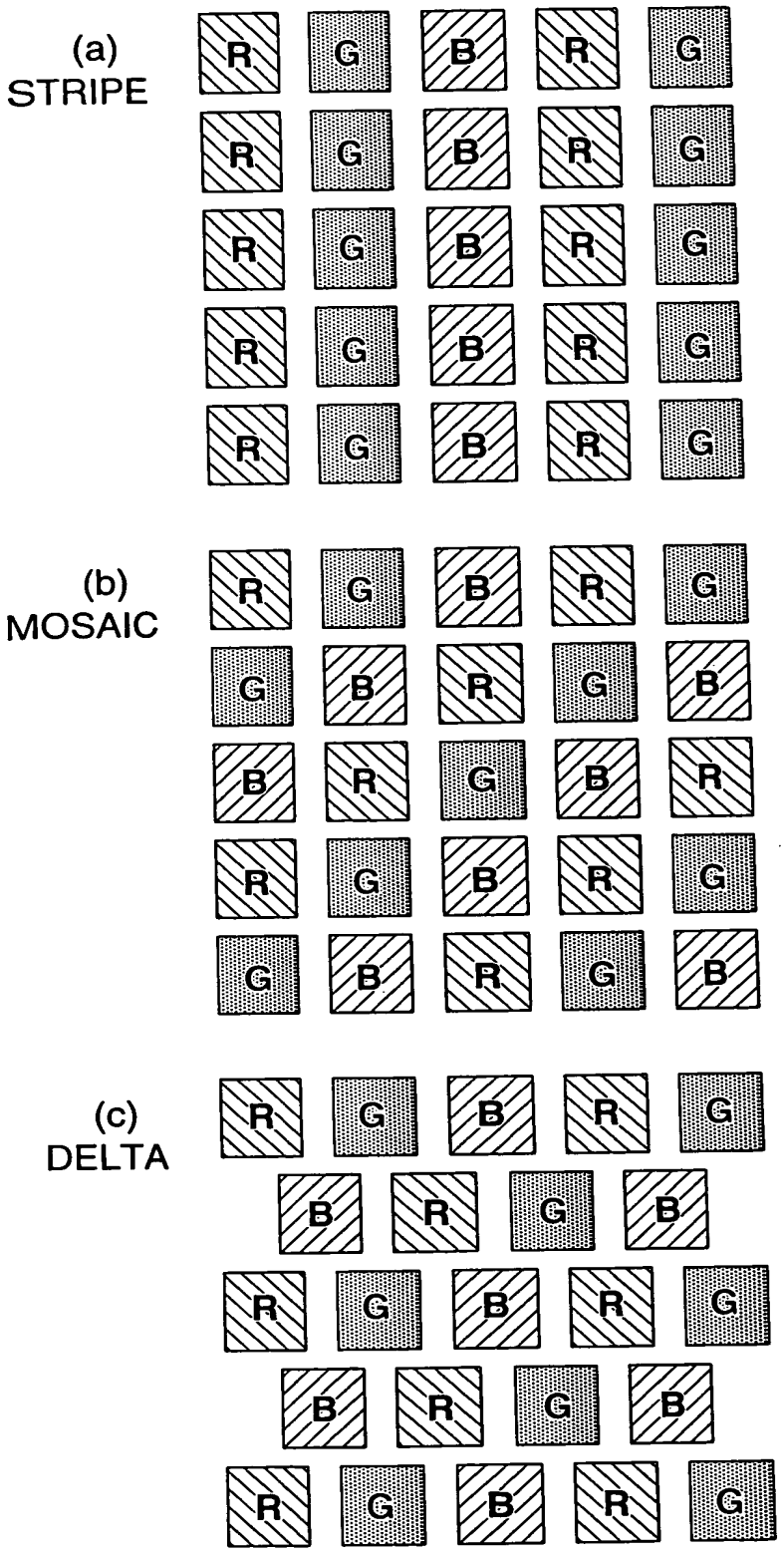

FIG. 4

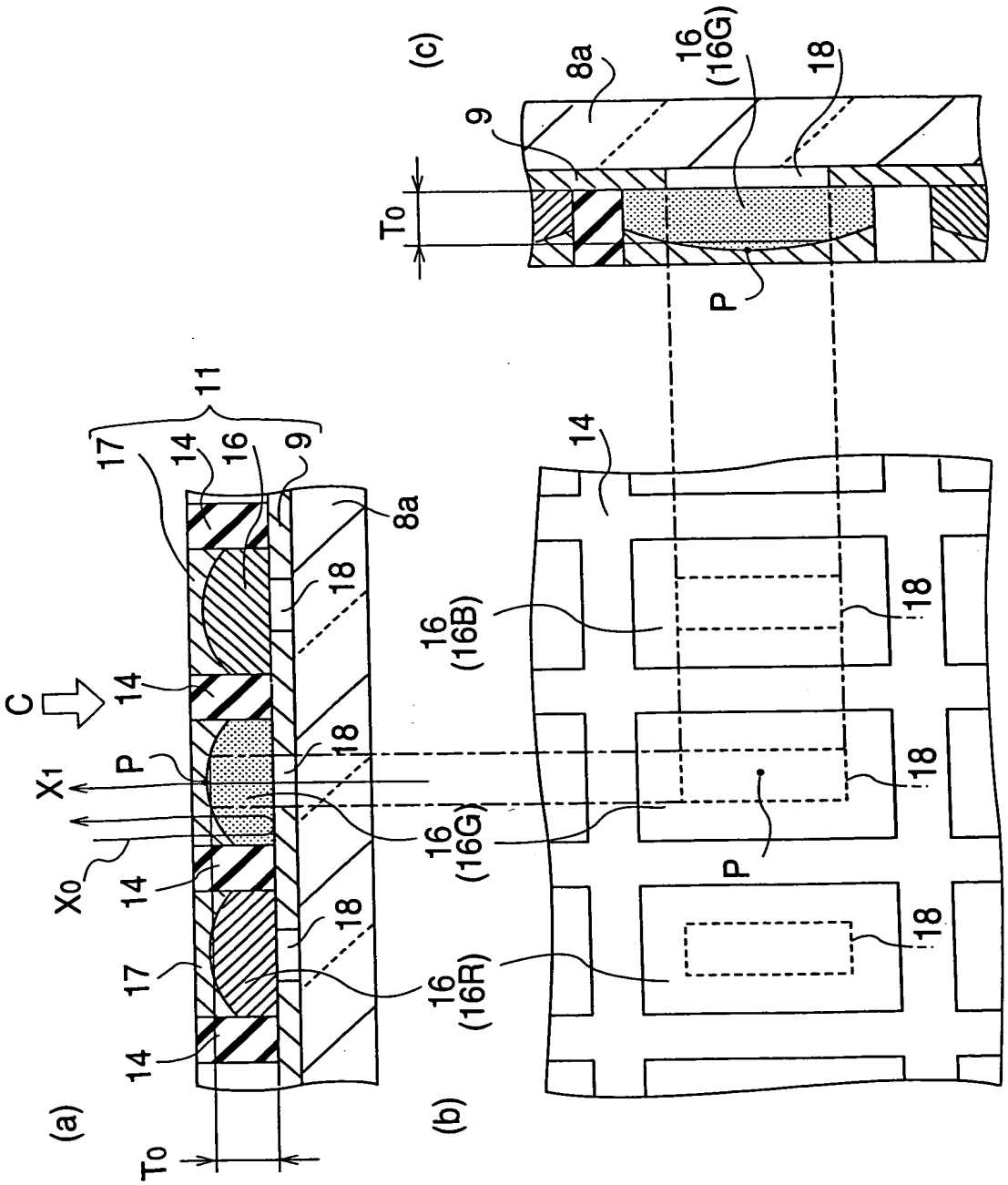

FIG. 5

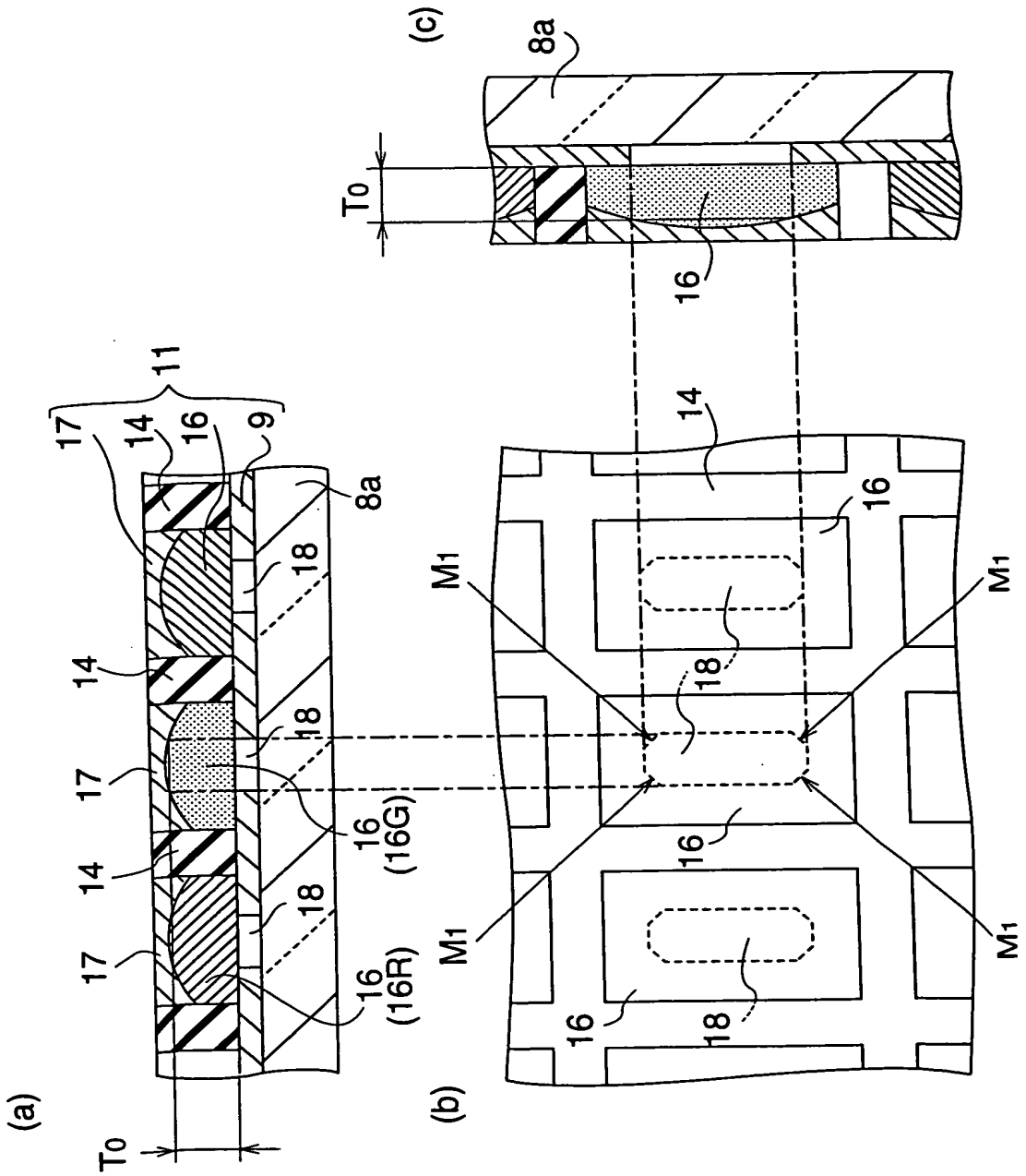

FIG. 6

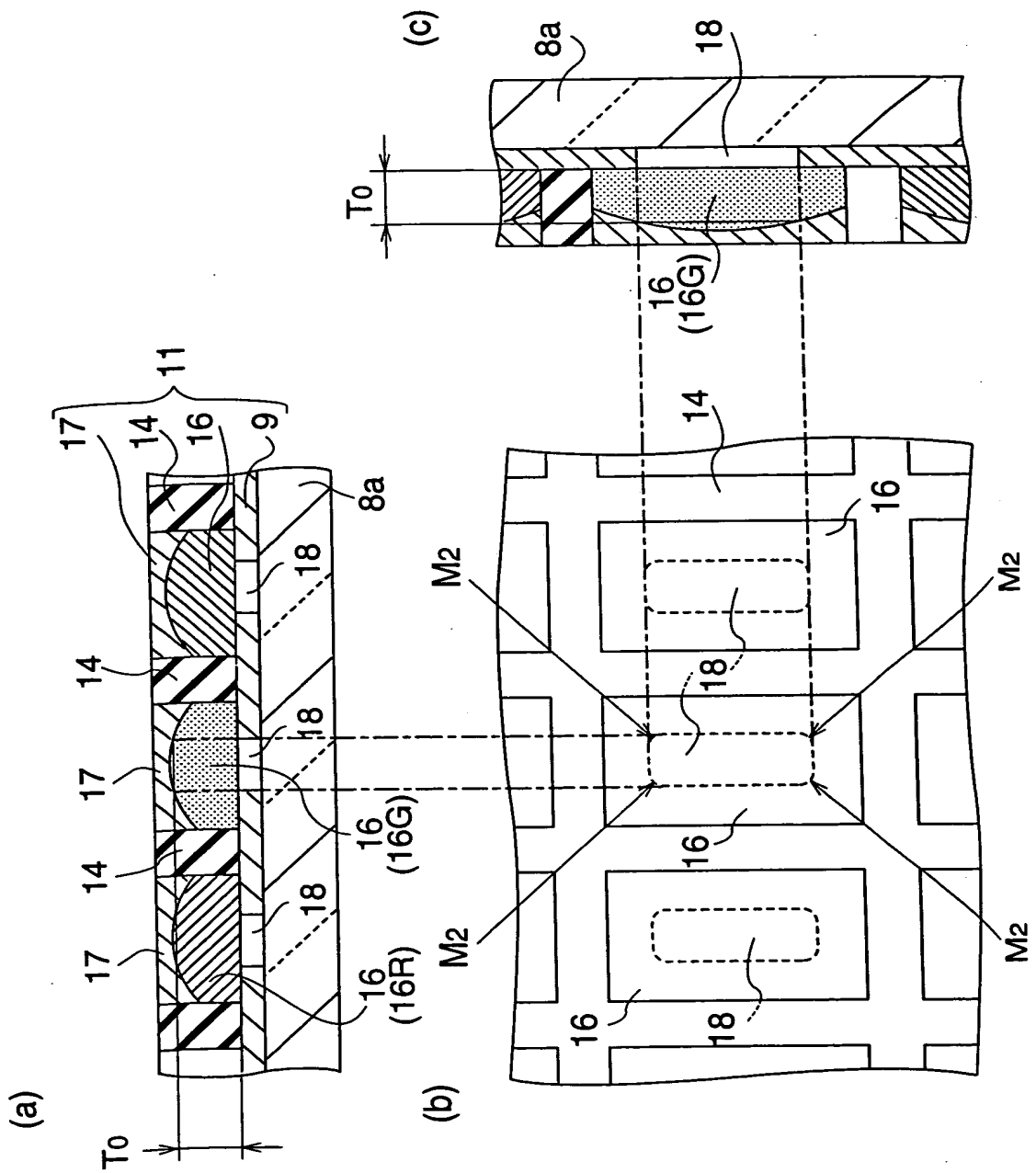
(a)
(b)
(c)
11
17
14
16
9
8a
18
14
18
17
16
(16G)
14
18
17
16
(16R)
T0
M2
M2
M2
M2
16
18
16
18
16
18
8a
T0
16
(16G)
14
16

FIG. 7

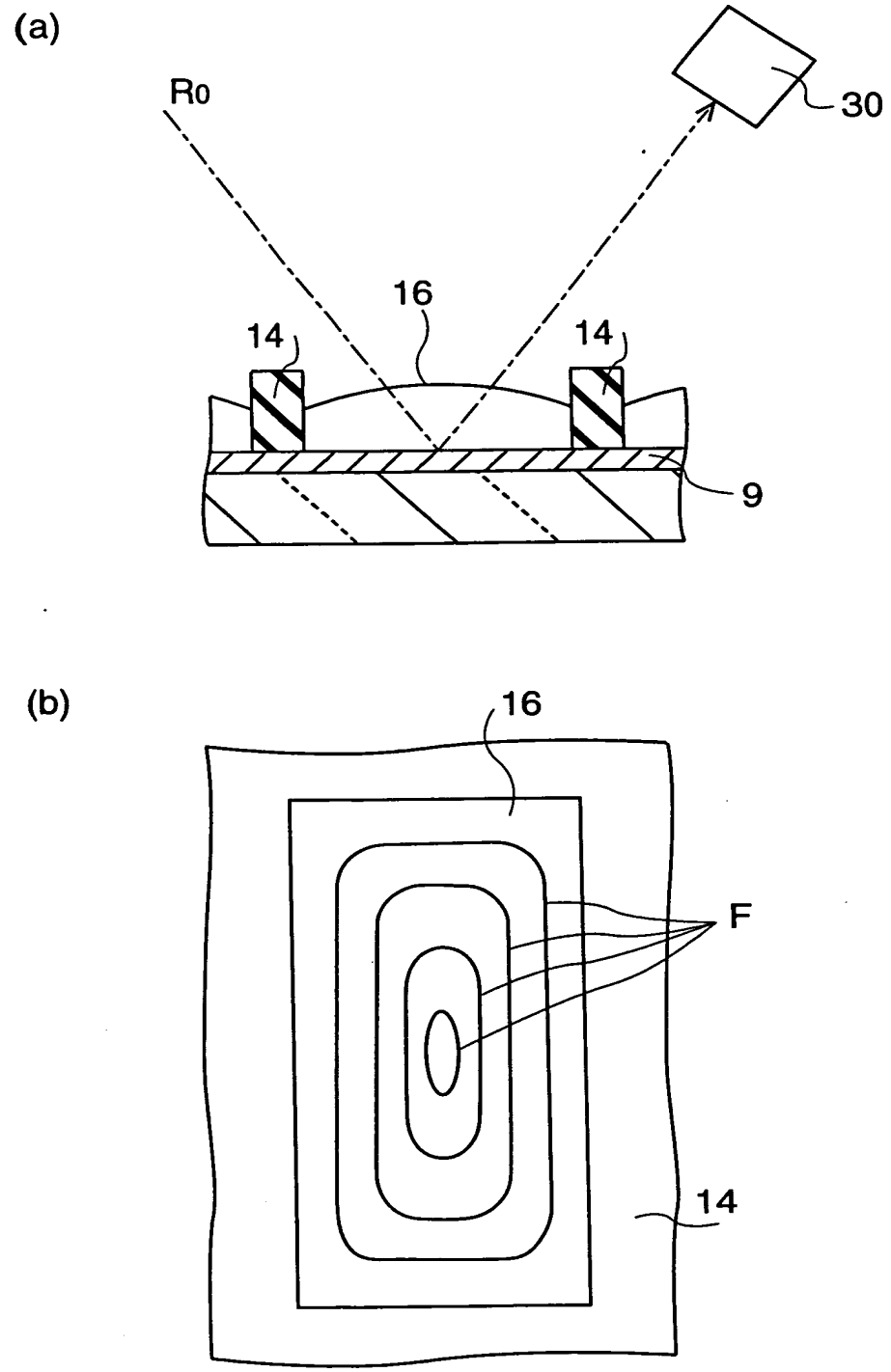

FIG. 8

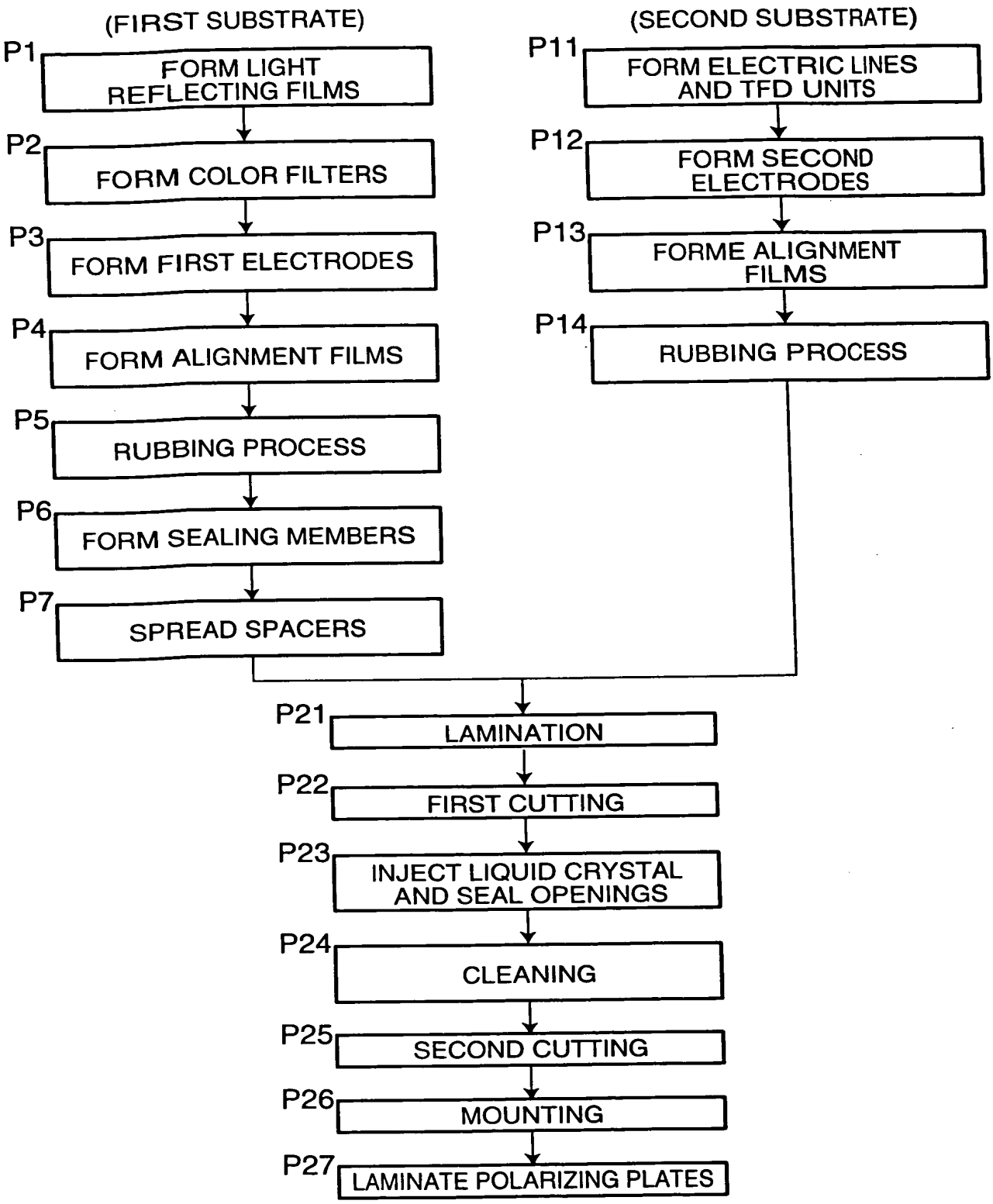
(FIRST SUBSTRATE)
P1
FORM LIGHT REFLECTING FILMS
P2
FORM COLOR FILTERS
P3
FORM FIRST ELECTRODES
P4
FORM ALIGNMENT FILMS
P5
RUBBING PROCESS
P6
FORM SEALING MEMBERS
P7
SPREAD SPACERS
(SECOND SUBSTRATE)
P11
FORM ELECTRIC LINES AND TFD UNITS
P12
FORM SECOND ELECTRODES
P13
FORME ALIGNMENT FILMS
P14
RUBBING PROCESS
P21
LAMINATION
P22
FIRST CUTTING
P23
INJECT LIQUID CRYSTAL AND SEAL OPENINGS
P24
CLEANING
P25
SECOND CUTTING
P26
MOUNTING
P27
LAMINATE POLARIZING PLATES

FIG. 9

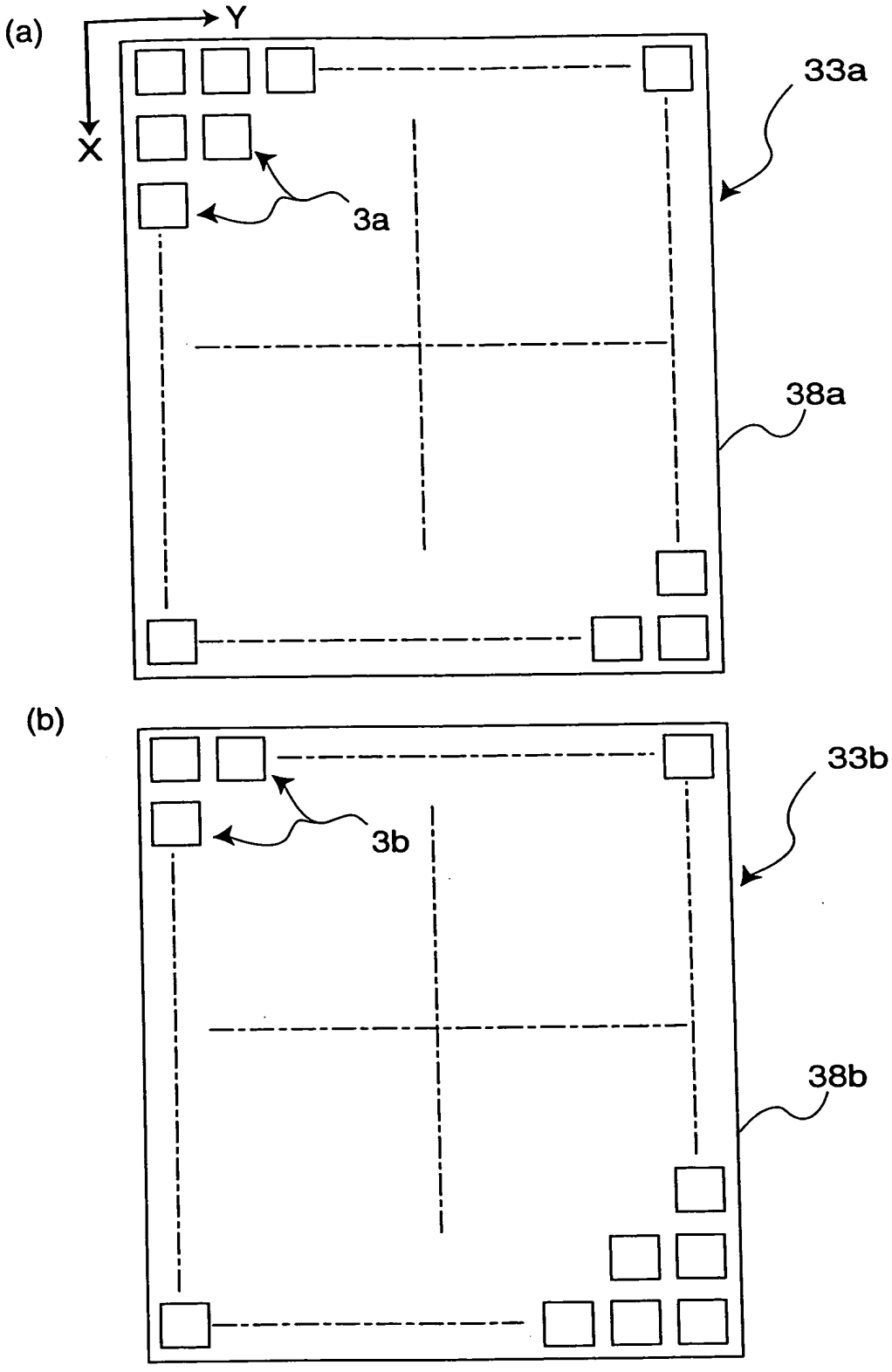

FIG. 10

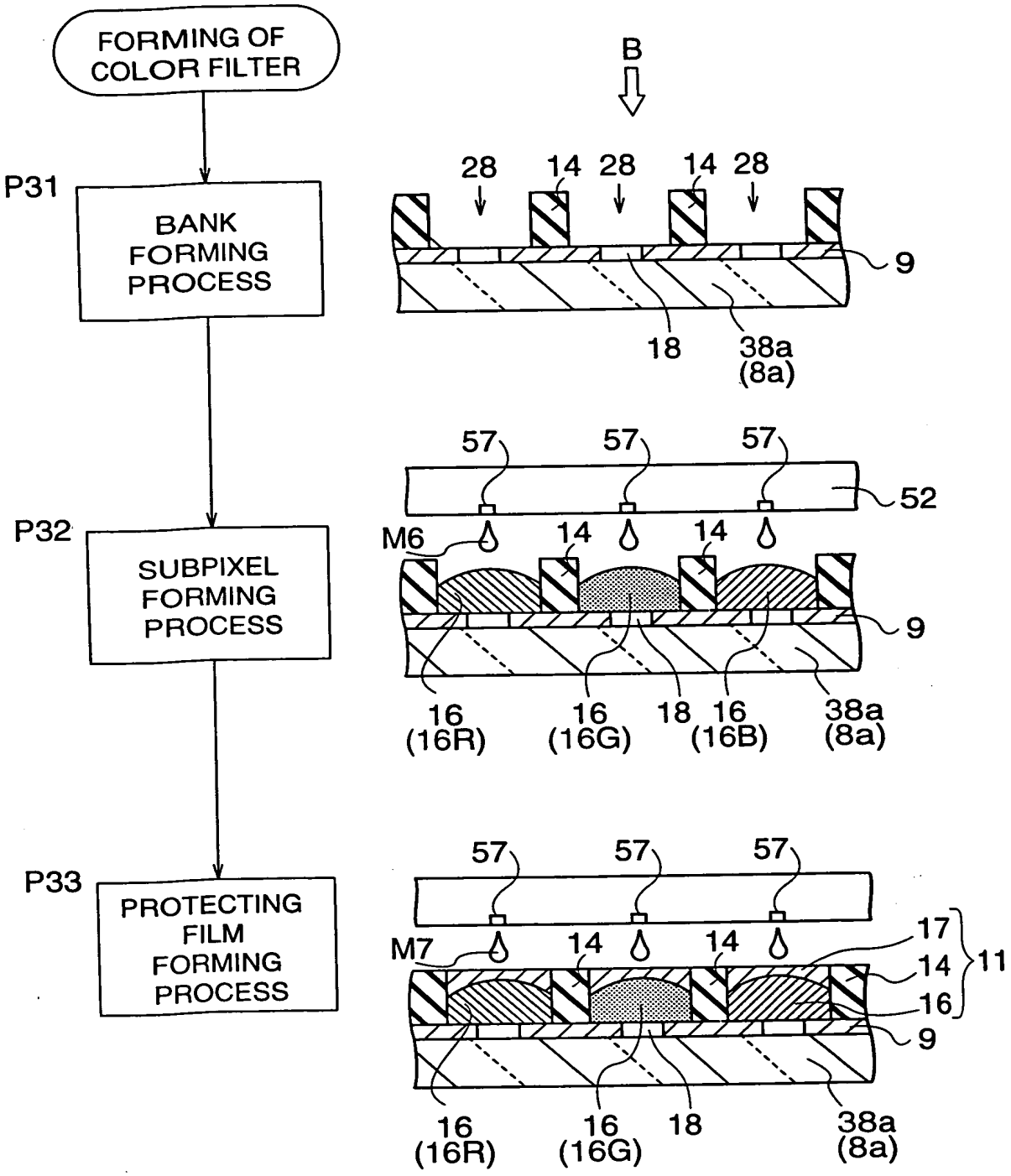
FORMING OF COLOR FILTER
P31
BANK FORMING PROCESS
P32
SUBPIXEL FORMING PROCESS
P33
PROTECTING FILM FORMING PROCESS
B
28
14
28
14
28
9
18
38a
(8a)
57
57
57
52
M6
14
14
9
16
(16R)
16
(16G)
18
16
(16B)
38a
(8a)
57
57
57
M7
14
14
17
14
16
11
9
16
(16R)
16
(16G)
18
38a
(8a)

FIG. 11

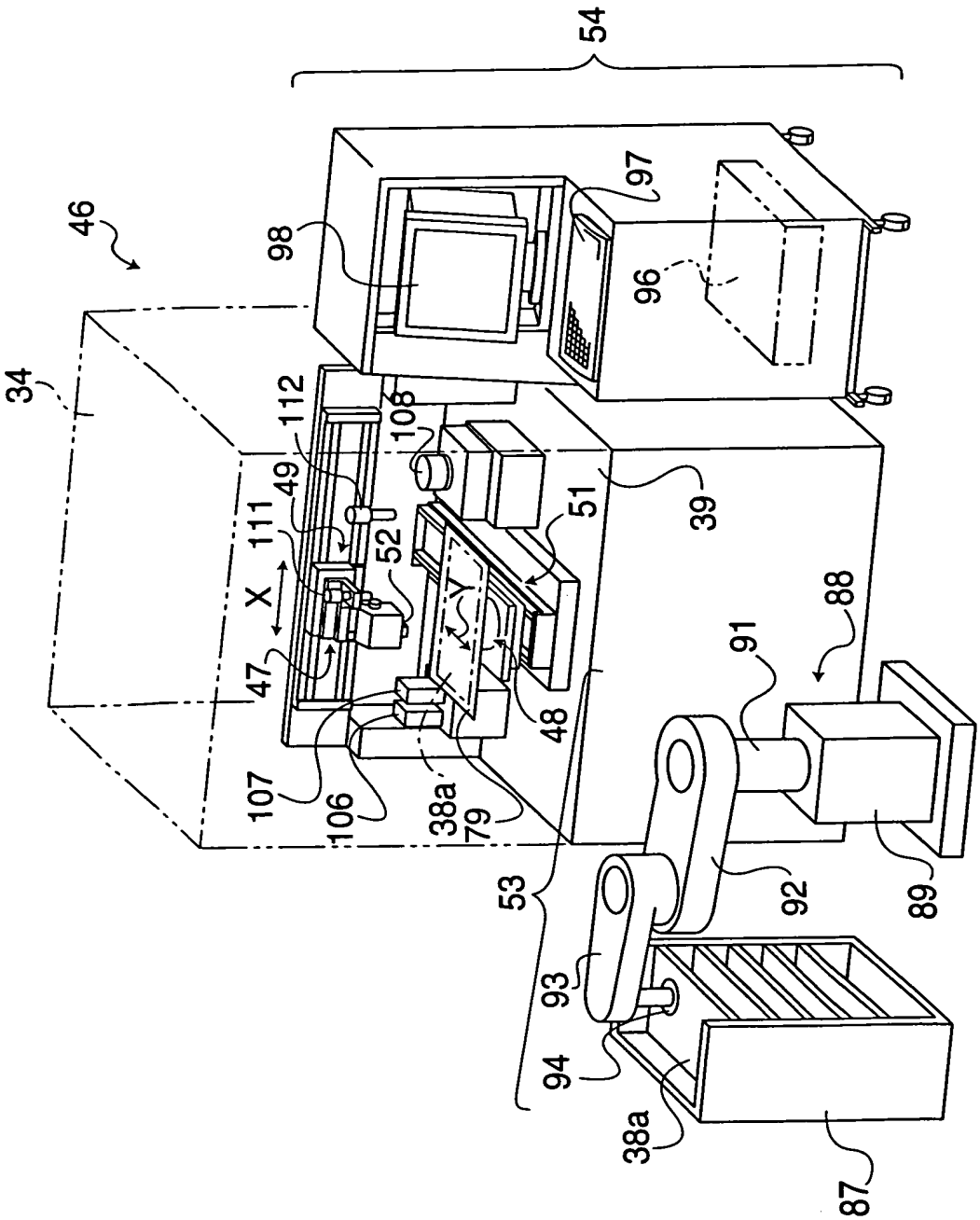
54
46
98
97
96
34
112
108
49
111
52
51
39
X
Y
88
91
47
48
107
106
38a
79
53
92
89
93
94
38a
87

FIG. 12

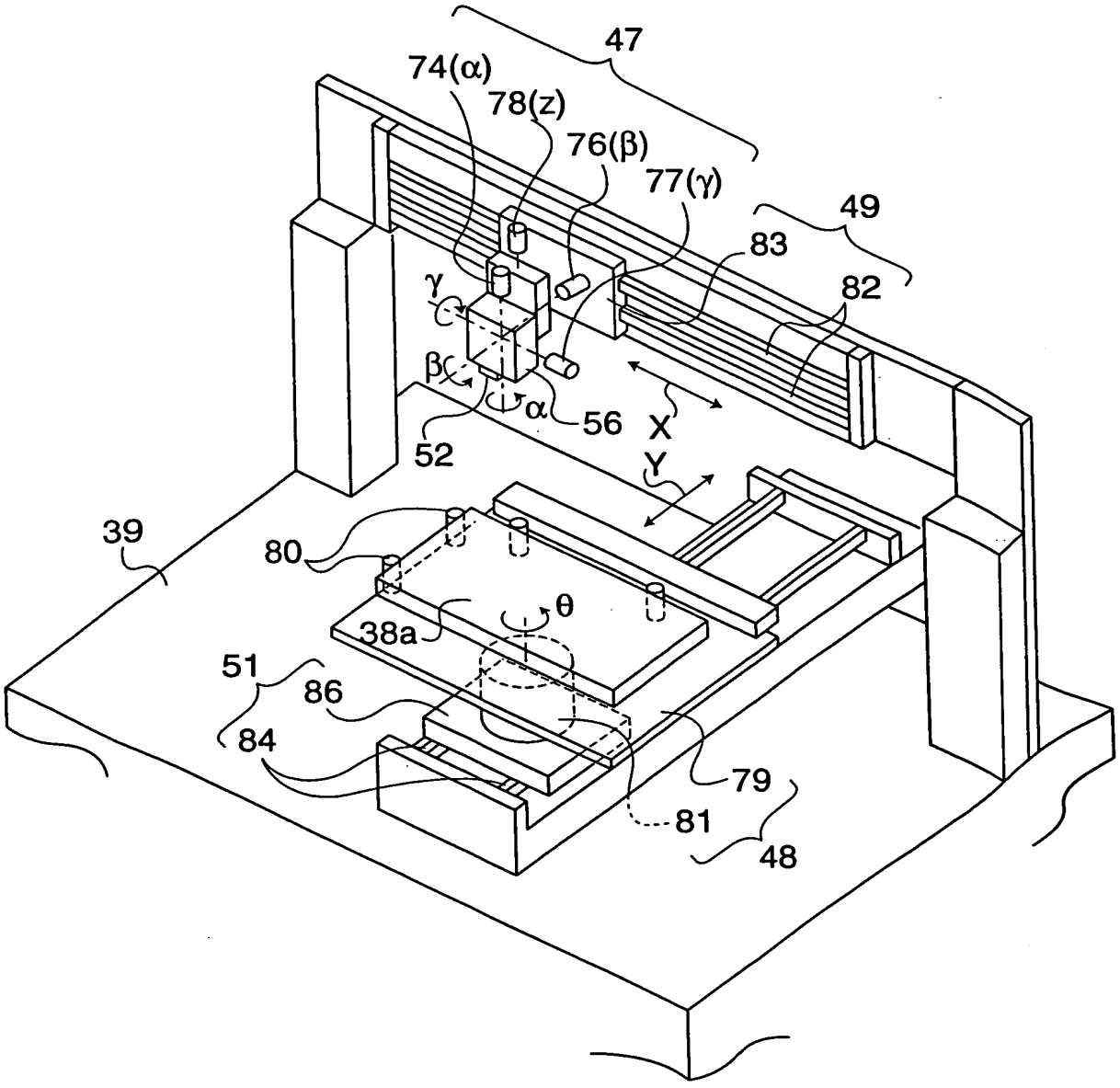

FIG. 13

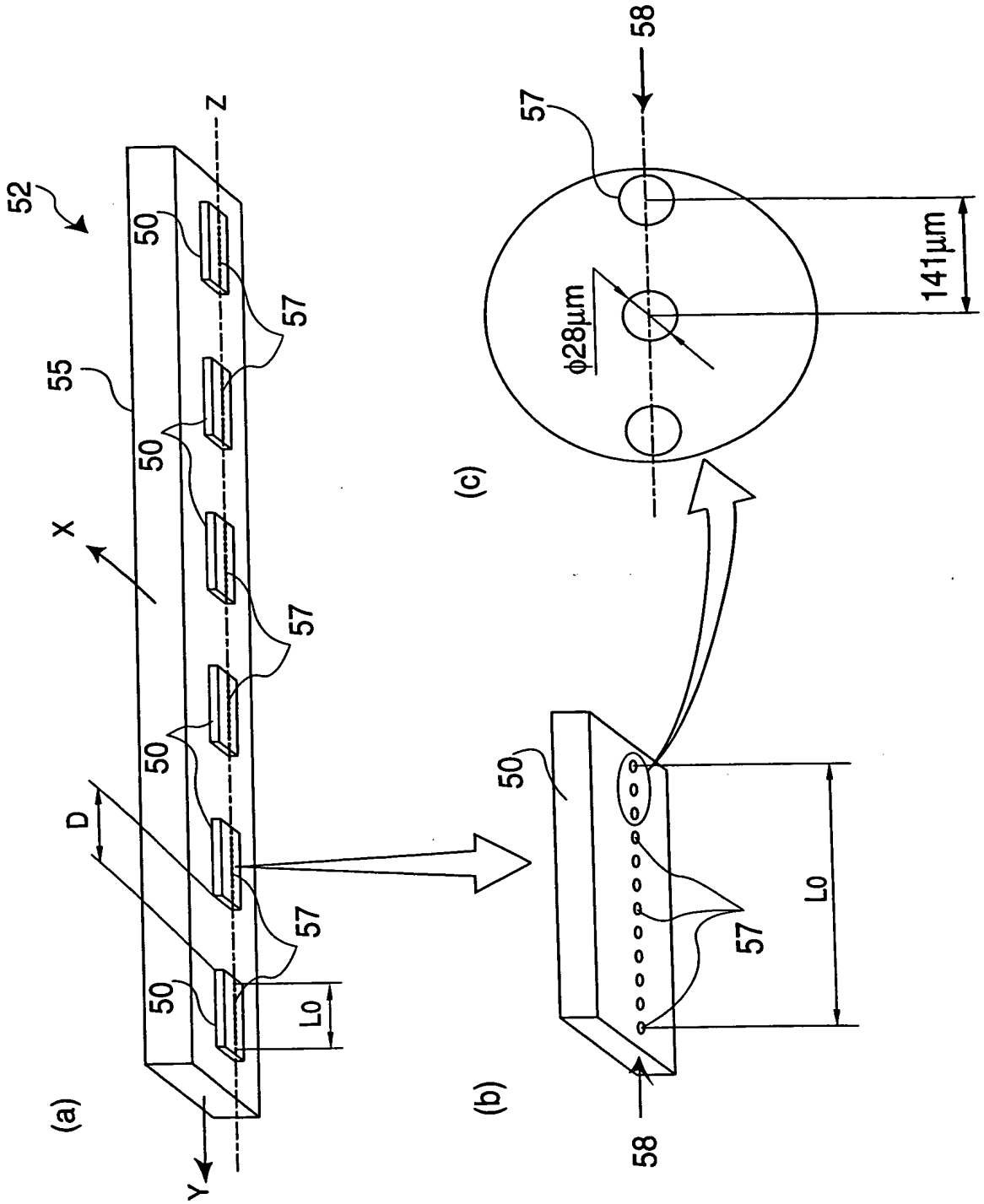

FIG. 14

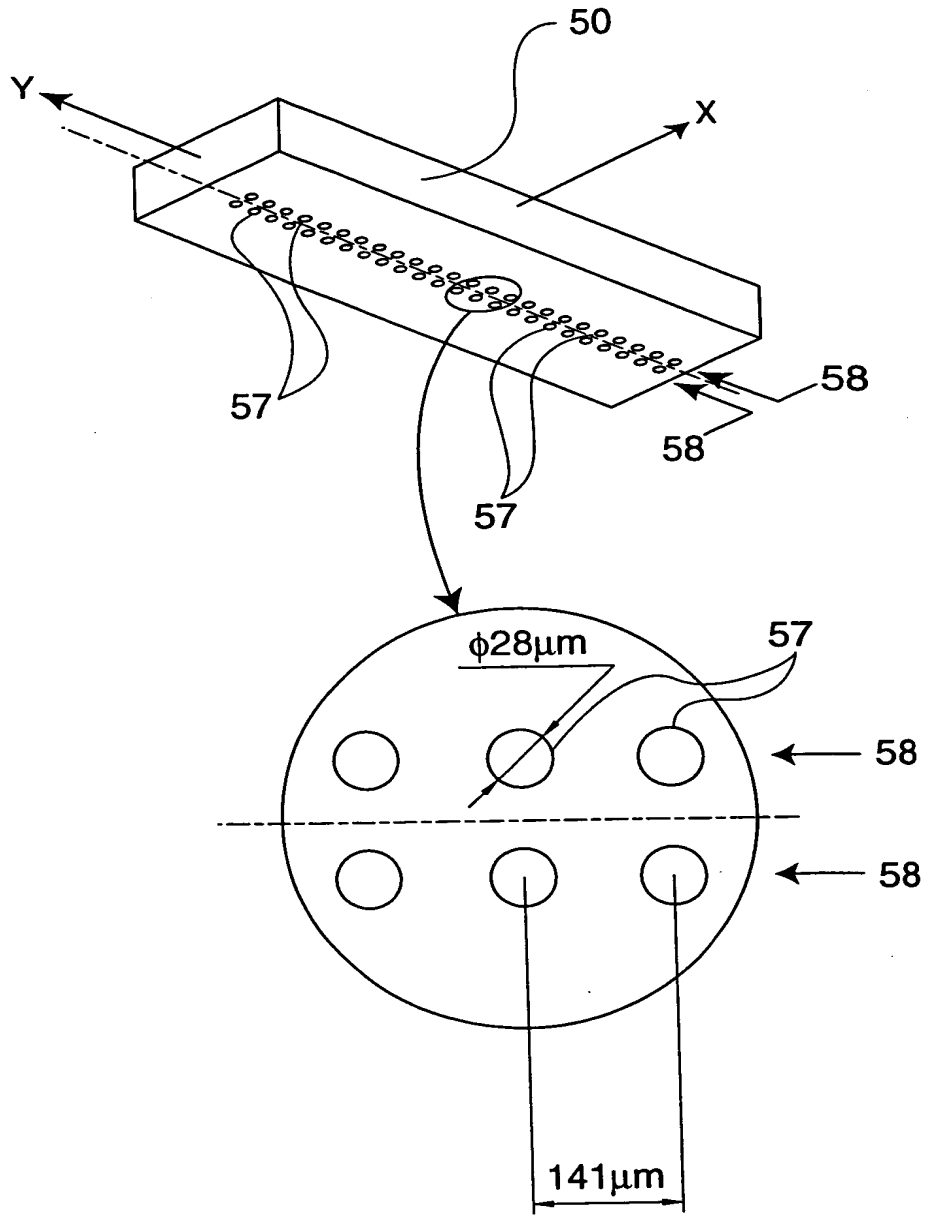

FIG. 15

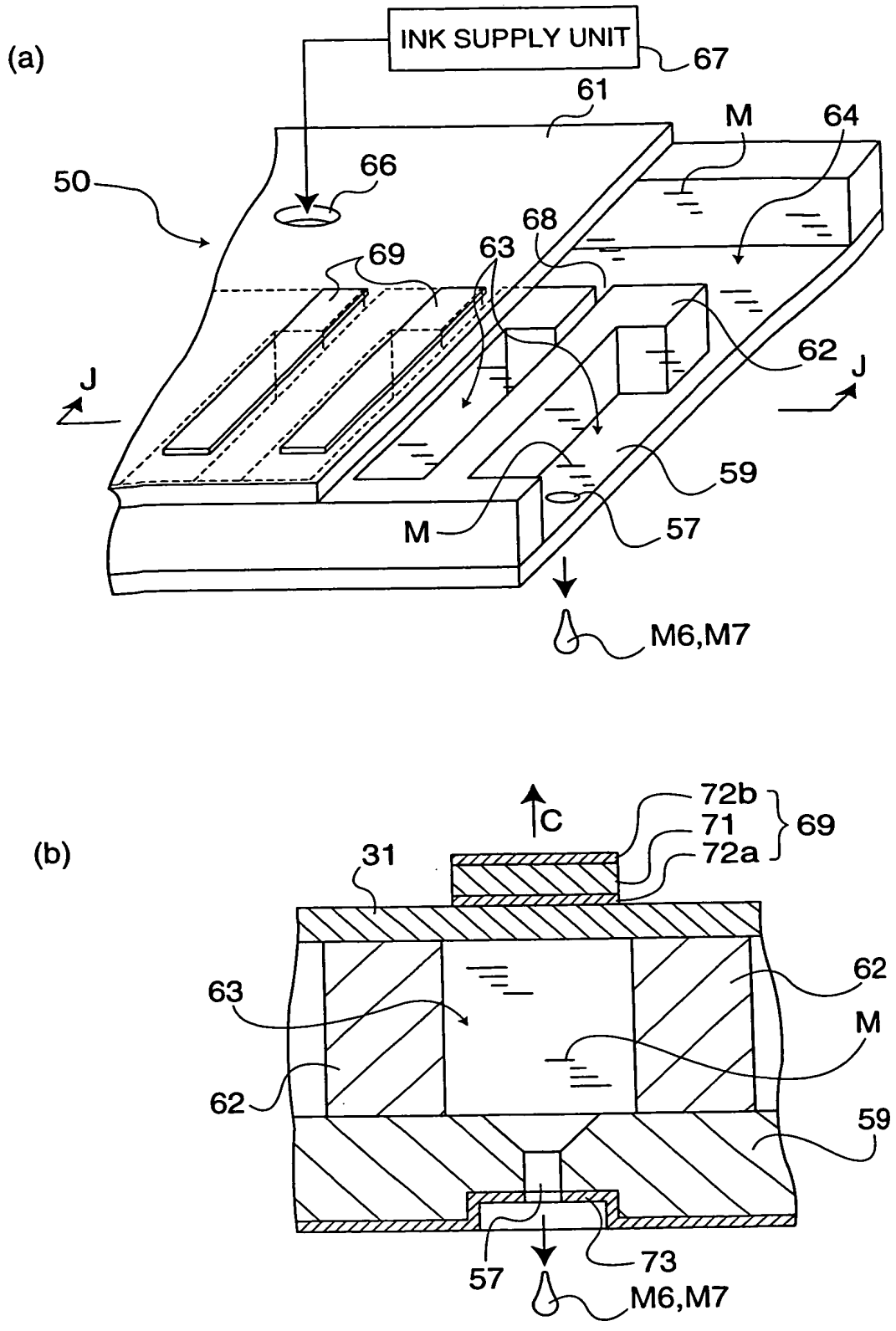
(a)
INK SUPPLY UNIT
67
61
M
64
66
50
68
69
63
62
J
J
59
M
57
M6,M7
(b)
C
72b
71
72a
69
31
62
63
M
62
59
57
73
M6,M7

FIG. 16

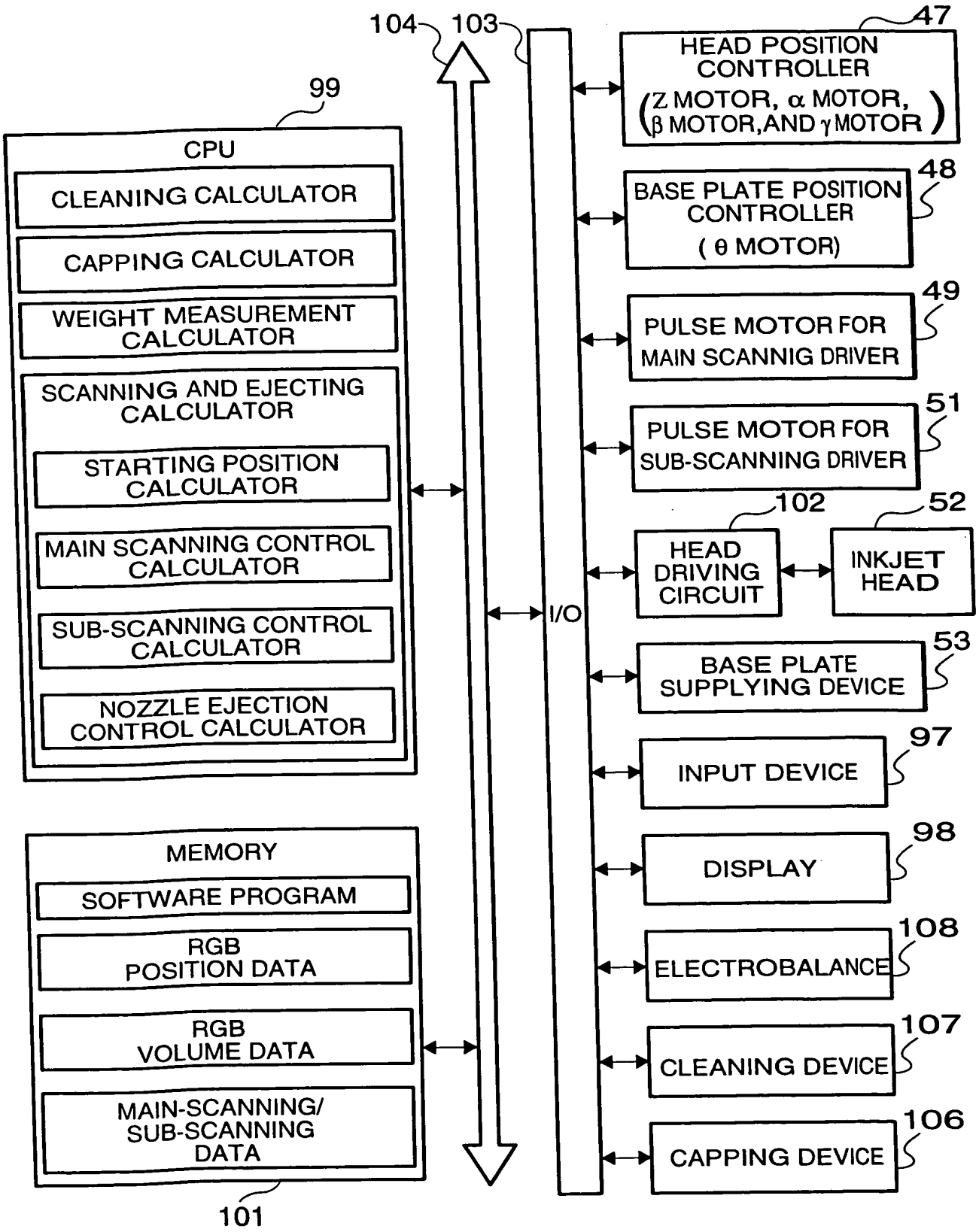
104
103
47
HEAD POSITION CONTROLLER
(Z MOTOR, α MOTOR, β MOTOR, AND γ MOTOR)
99
CPU
CLEANING CALCULATOR
CAPPING CALCULATOR
WEIGHT MEASUREMENT CALCULATOR
SCANNING AND EJECTING CALCULATOR
STARTING POSITION CALCULATOR
MAIN SCANNING CONTROL CALCULATOR
SUB-SCANNING CONTROL CALCULATOR
NOZZLE EJECTION CONTROL CALCULATOR
48
BASE PLATE POSITION CONTROLLER
(θ MOTOR)
49
PULSE MOTOR FOR MAIN SCANNIG DRIVER
51
PULSE MOTOR FOR SUB-SCANNING DRIVER
102
52
HEAD DRIVING CIRCUIT
INKJET HEAD
I/O
53
BASE PLATE SUPPLYING DEVICE
97
INPUT DEVICE
98
DISPLAY
108
ELECTROBALANCE
107
CLEANING DEVICE
106
CAPPING DEVICE
MEMORY
SOFTWARE PROGRAM
RGB POSITION DATA
RGB VOLUME DATA
MAIN-SCANNING/ SUB-SCANNING DATA
101

FIG. 17

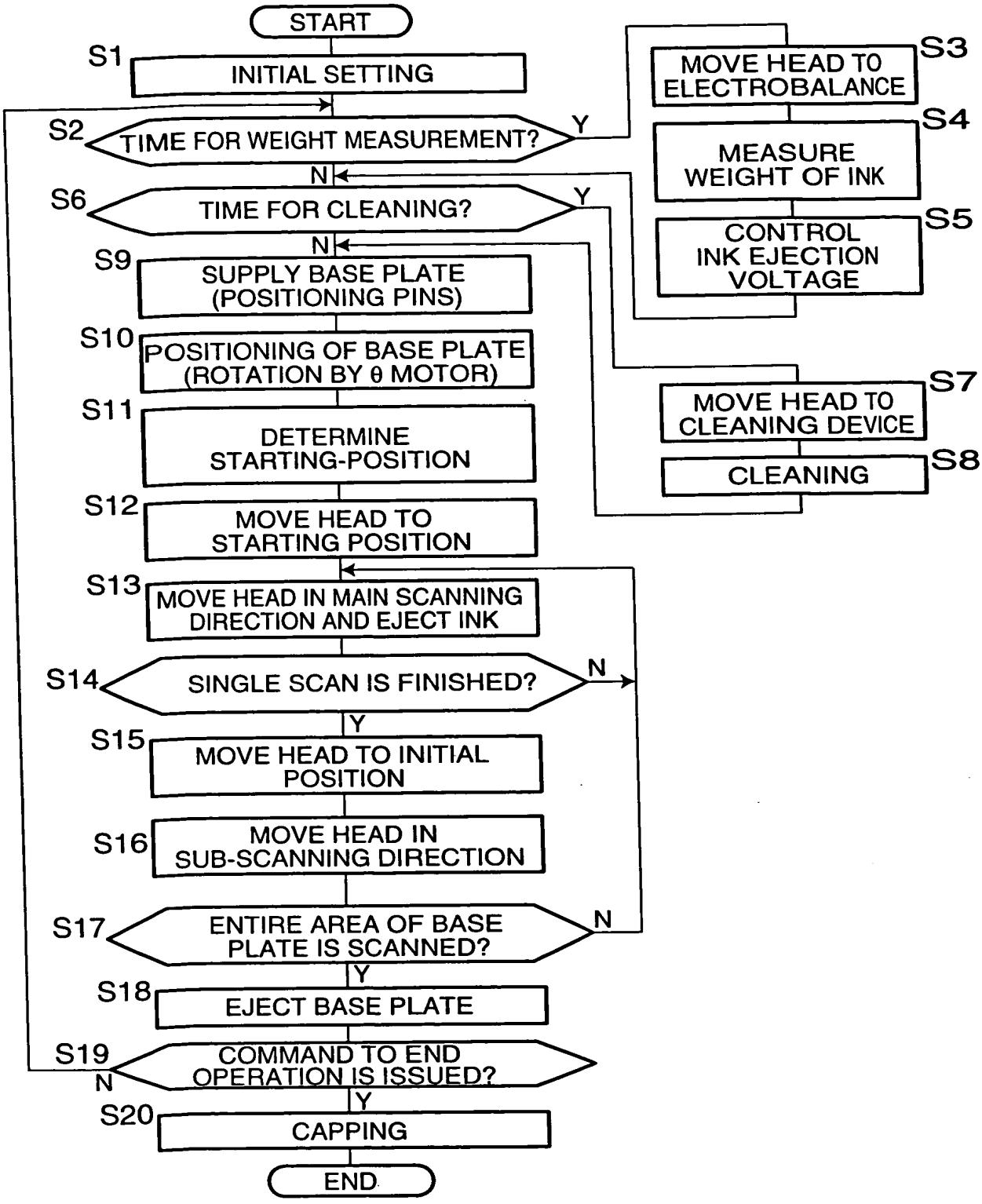
START
S1
INITIAL SETTING
S2
TIME FOR WEIGHT MEASUREMENT?
Y
N
S3
MOVE HEAD TO ELECTROBALANCE
S4
MEASURE WEIGHT OF INK
S5
CONTROL INK EJECTION VOLTAGE
S6
TIME FOR CLEANING?
Y
N
S7
MOVE HEAD TO CLEANING DEVICE
S8
CLEANING
S9
SUPPLY BASE PLATE (POSITIONING PINS)
S10
POSITIONING OF BASE PLATE (ROTATION BY θ MOTOR)
S11
DETERMINE STARTING-POSITION
S12
MOVE HEAD TO STARTING POSITION
S13
MOVE HEAD IN MAIN SCANNING DIRECTION AND EJECT INK
S14
SINGLE SCAN IS FINISHED?
N
Y
S15
MOVE HEAD TO INITIAL POSITION
S16
MOVE HEAD IN SUB-SCANNING DIRECTION
S17
ENTIRE AREA OF BASE PLATE IS SCANNED?
N
Y
S18
EJECT BASE PLATE
S19
COMMAND TO END OPERATION IS ISSUED?
N
Y
S20
CAPPING
END

FIG. 18

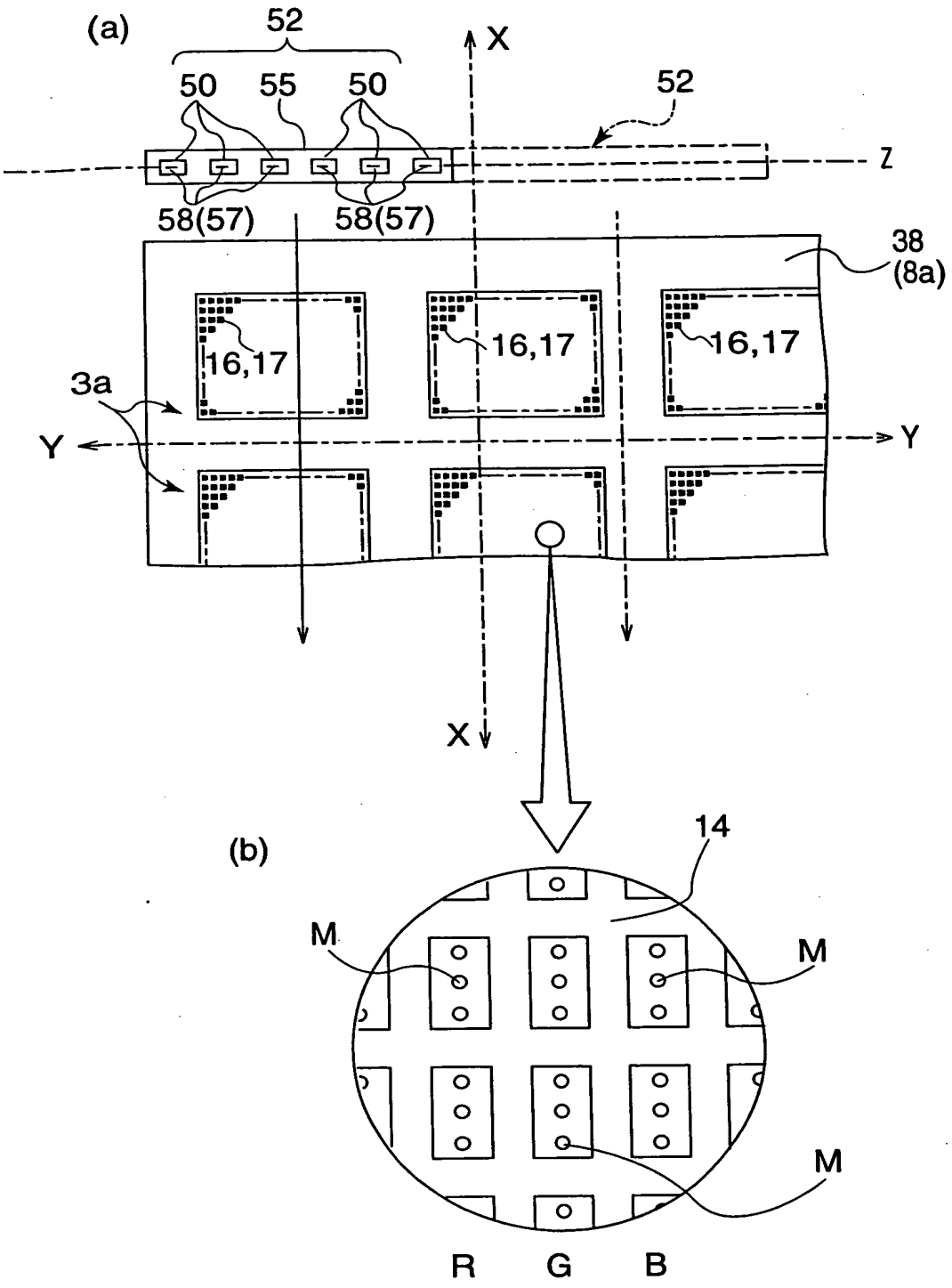
(a)
52
X
50
55
50
52
Z
58(57)
58(57)
38
(8a)
16,17
16,17
16,17
3a
Y
Y
X
(b)
14
M
M
M
R
G
B

FIG. 19

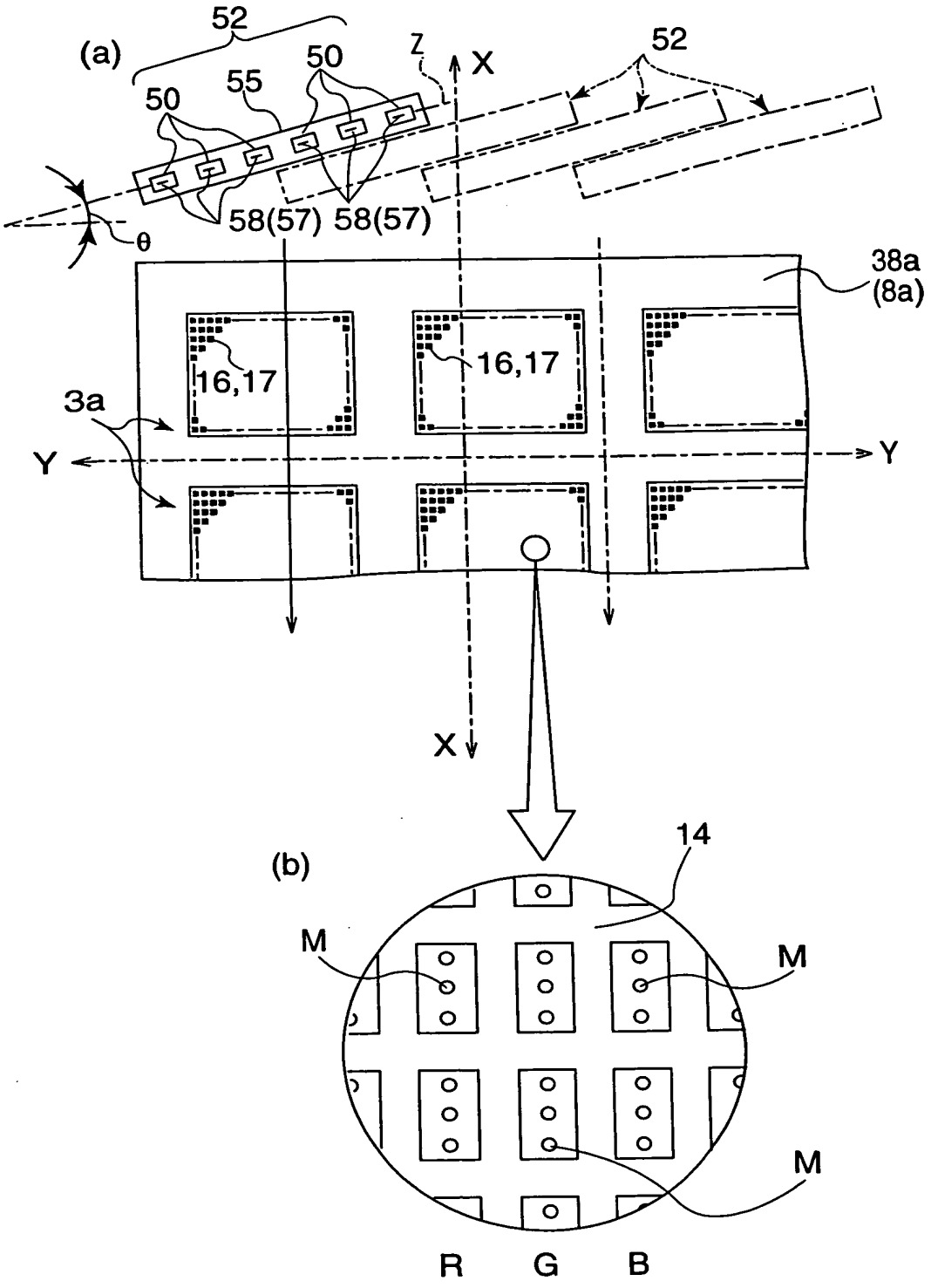

FIG. 20

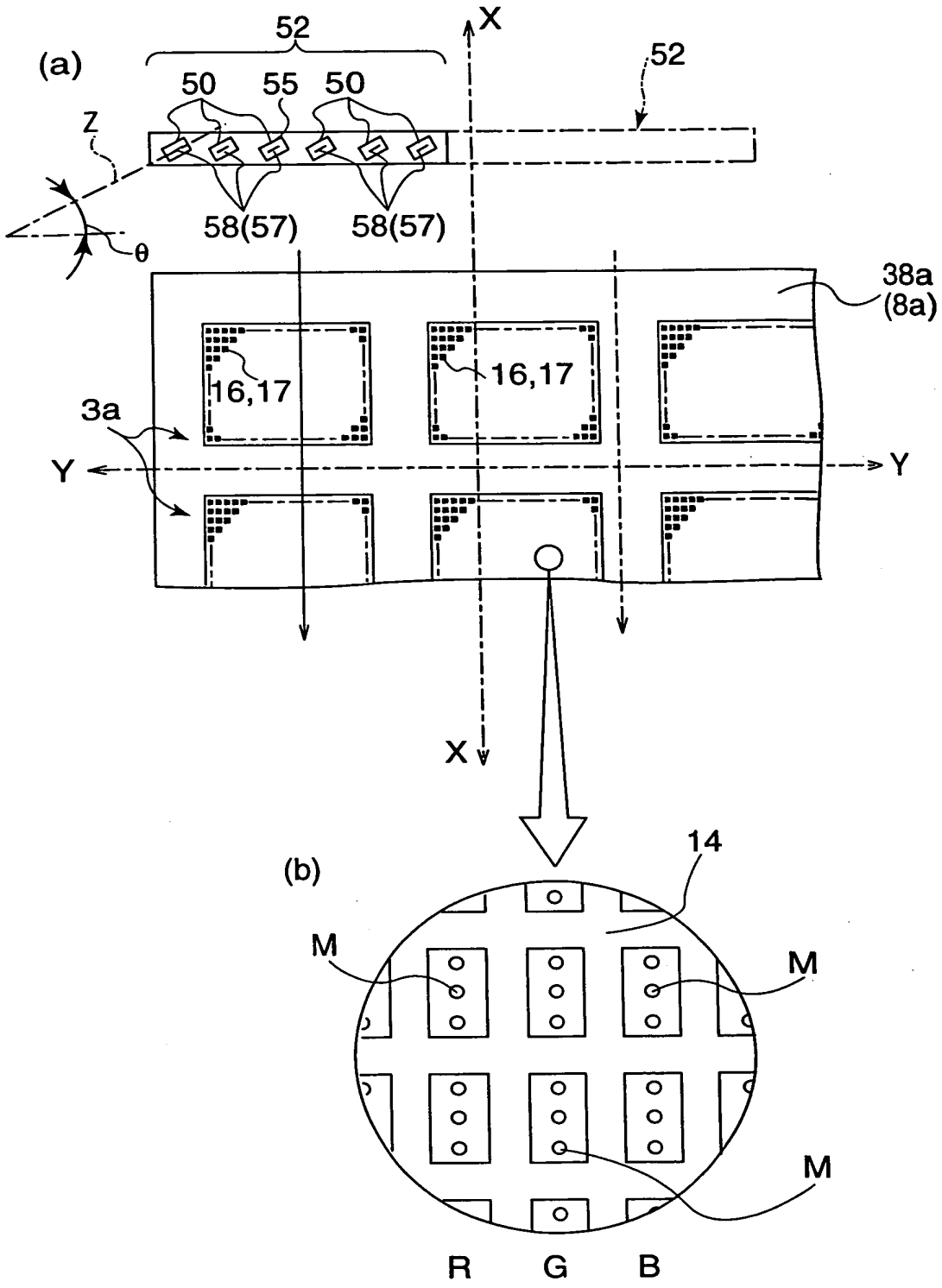

FIG. 21

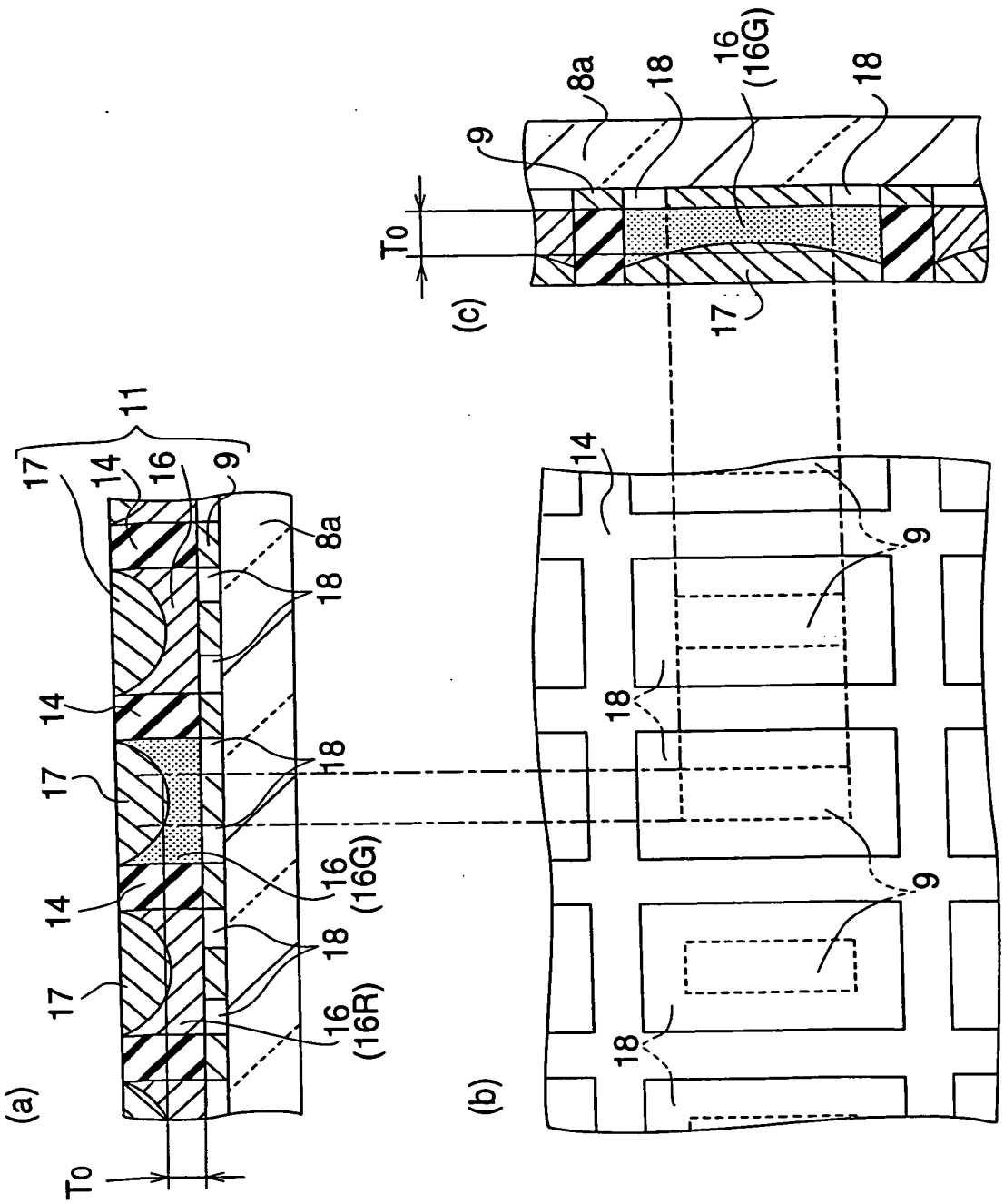

FIG. 22

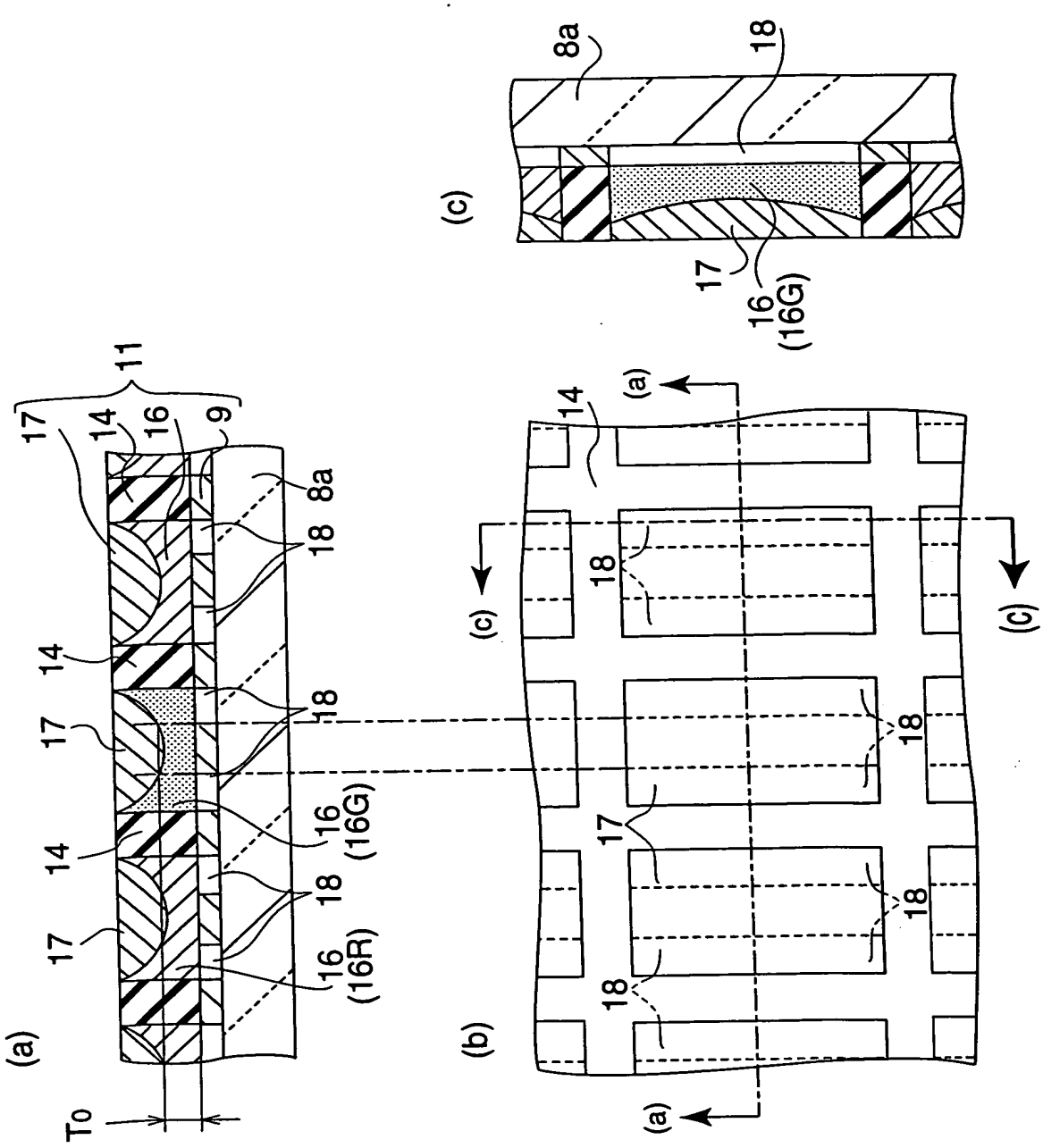
(c)
8a
18
17
16
(16G)
11
17
14
16
9
8a
18
14
18
17
16
(16G)
14
18
17
16
(16R)
(a)
T0
(b)
(a)
14
(a)
(c)
18
(c)
18
17
18
18
(a)

FIG. 23

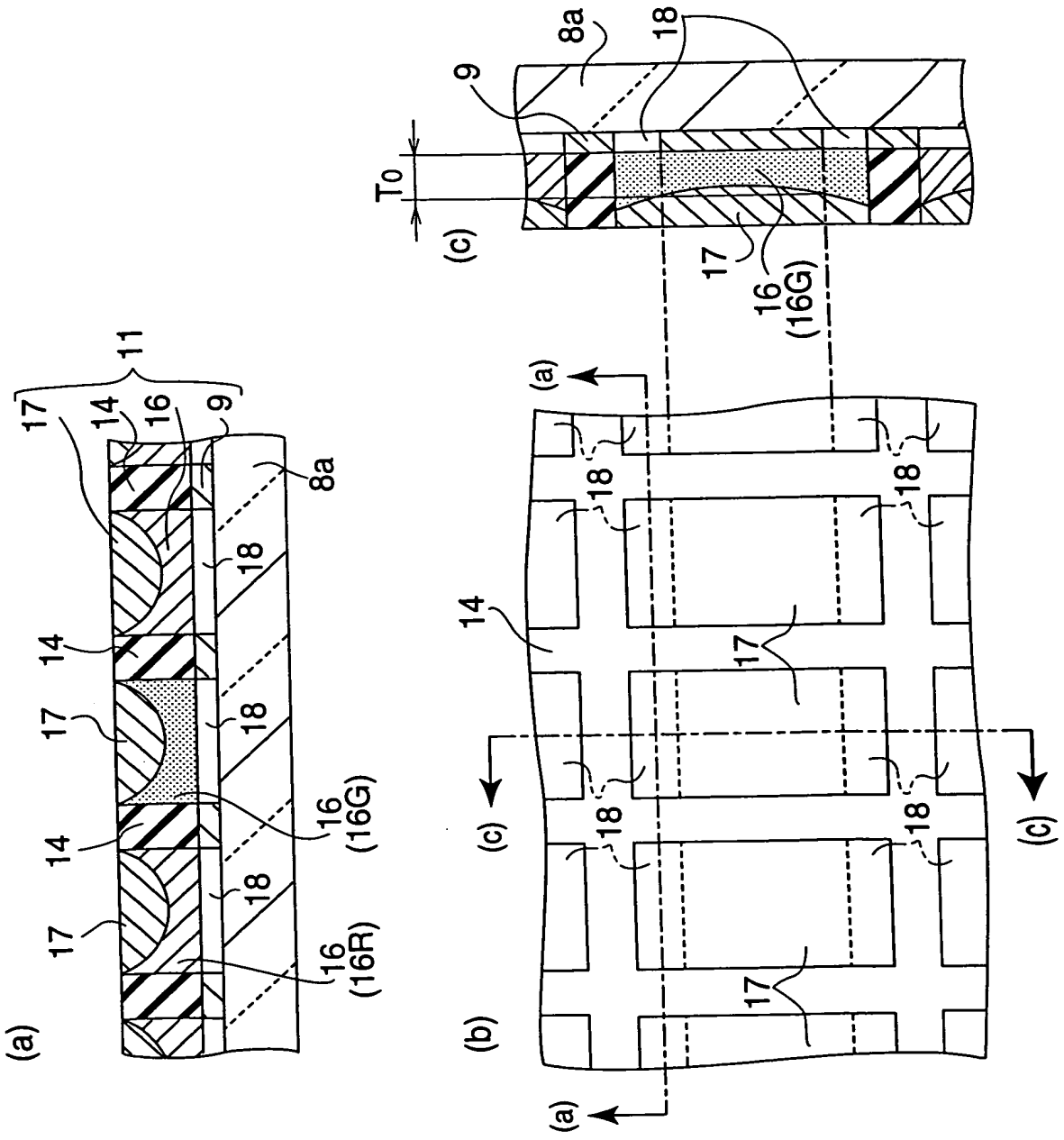

FIG. 24

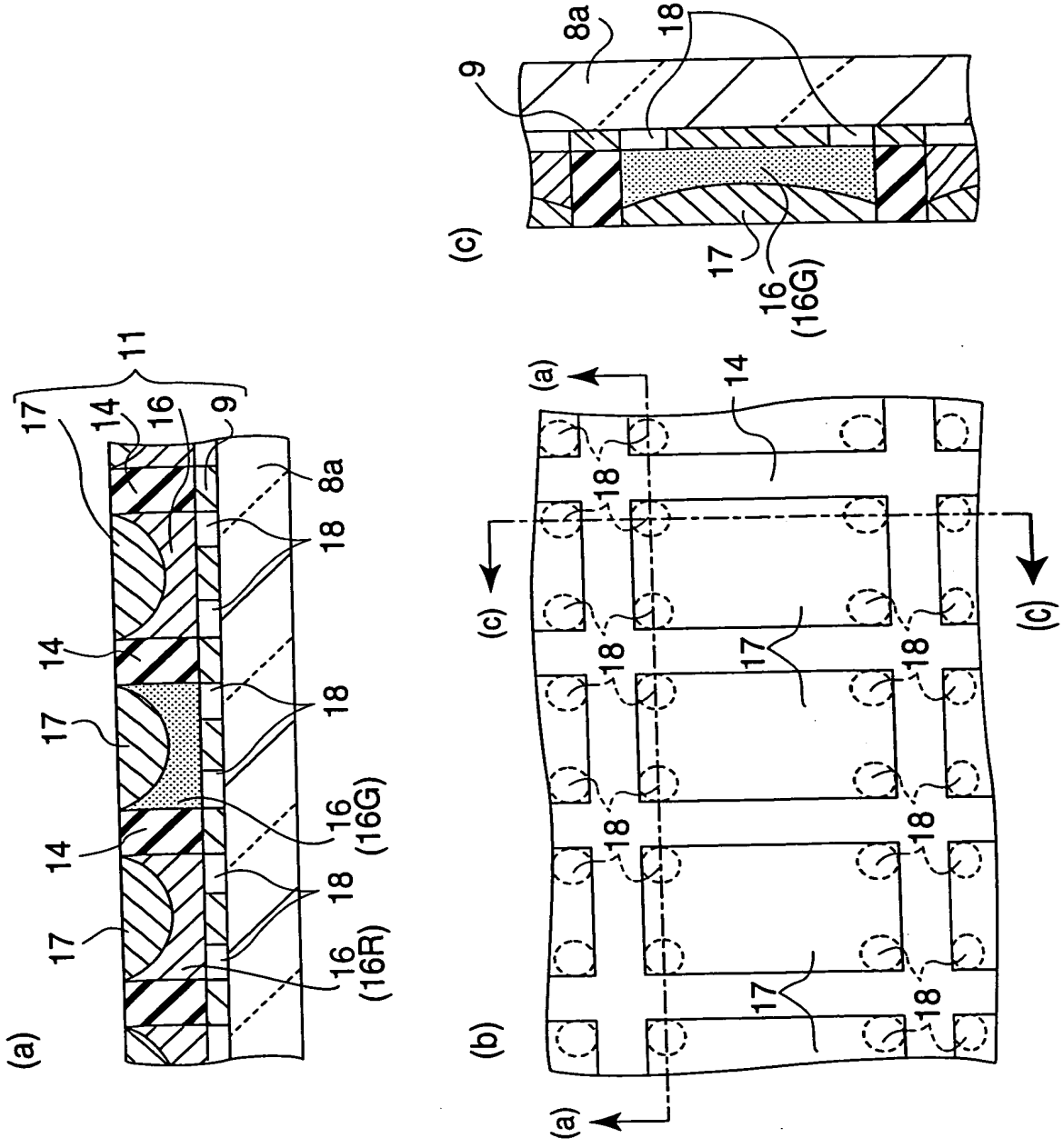
(a)
11
17
14
16
9
8a
18
14
17
18
16
(16G)
14
18
17
16
(16R)
(b)
(a)
14
18
(c)
(c)
17
(a)
(c)
8a
18
9
17
16
(16G)

FIG. 25

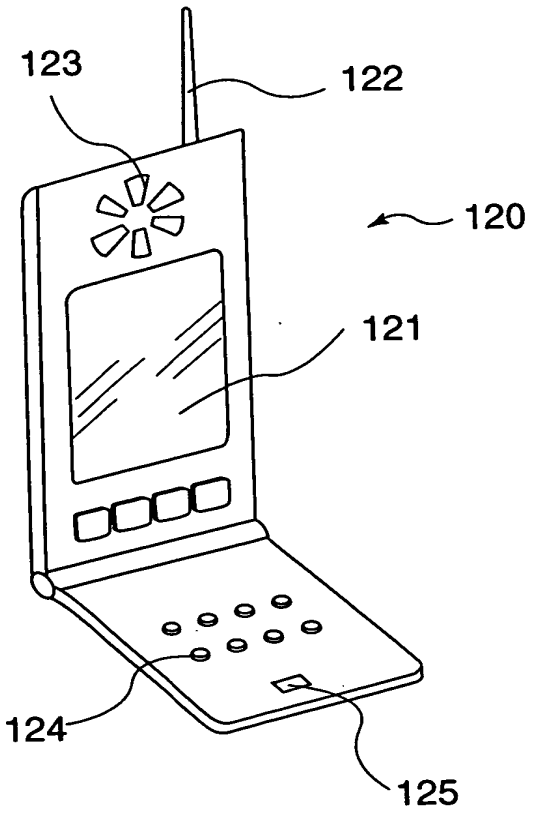

FIG. 26

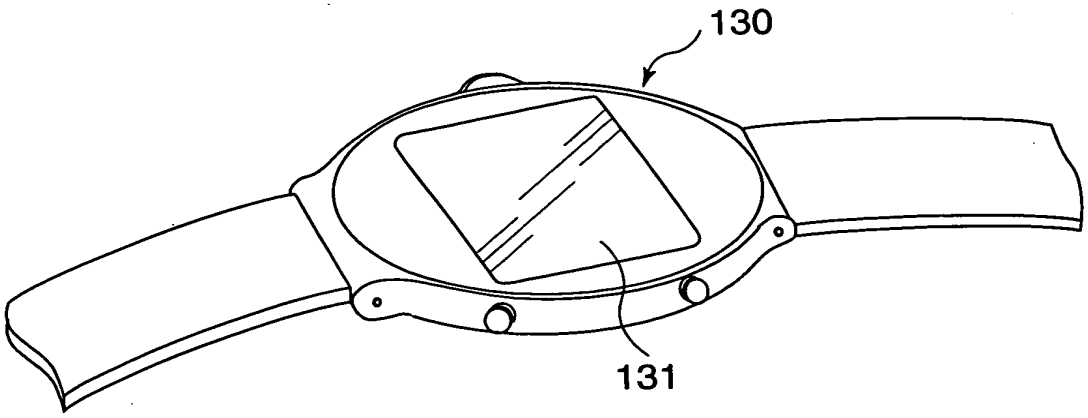

FIG. 27

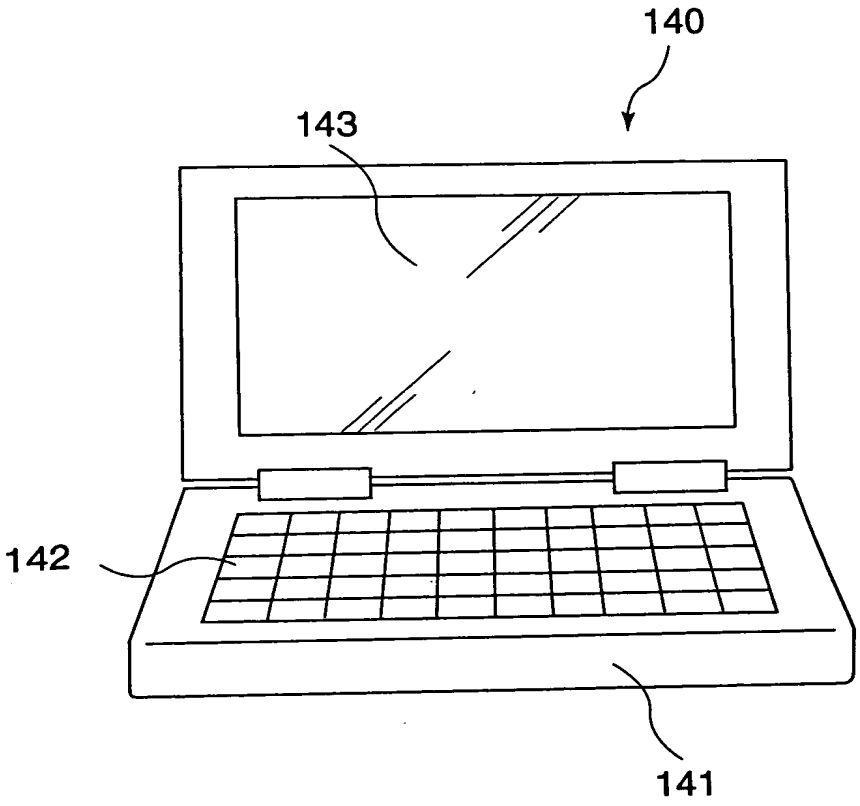

FIG. 28